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EXAMINER
DUPUIS, DEREK L

ART UNIT	PAPER NUMBER
2883	

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/649,516

Applicant(s)

STEIJER ET AL.

Examiner

Derek L. Dupuis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments, see page 6, in combination with the amendments to the claims filed 2/22/2006, with respect to the rejection of claim 12 under 35 U.S.C. 112 have been fully considered and are persuasive. The rejection of claim 12 under 35 U.S.C. 112 has been withdrawn.
2. Applicant's arguments filed 2/22/2006 regarding the rejection of claims 1-23 under 35 U.S.C. 102(b) have been fully considered but they are not persuasive. In page 7, applicant argues that "alignment substrate cited in the rejection of claim 1 and the lower capsule in the present invention are not equivalent because the lower capsule includes an airing hole and positioning holes for the optical and electronic hybrid combination." The examiner disagrees with this assertion. With regards to claim 1, airing holes and positioning holes are not claimed and therefore have no patentable weight. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).
3. In pages 7 and 8, applicant argues that the airing holes recited in claims 4 and 5 are not anticipated because "there is no teaching or suggestion in Tonai of using the through holes for avoiding moisture". Ignoring the fact that "avoiding moisture" is not recited anywhere in the claim, this is an intended use. As explained in paragraph 9 of the non-final office action, the holes (80a-80d and 86 and 88) in the upper and lower capsule parts meet this limitation because they are capable of allowing air to pass into the capsule. Applicant remarks that the holes are filled with leads which would restrict air flow. The examiner points out that at least holes 86 and

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88 would clearly allow air flow and would not be filled with metal leads. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ 2d 1647 (1987). The only structural limitations that the claimed limitation imparts is the presence of a hole, with the ability to pass air. Applicant's intended use "to avoid moisture" does not have patentable weight. The holes described in the Tonai reference meet the structural limitations of the claim and therefore anticipate the claim.

4. The rejection has been maintained and is repeated below. Because the only changes to the rejection were typographical in nature, this rejection is made FINAL.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-23 are rejected under 35 U.S.C. 102(b) as being anticipated by *Tonai et al (US 6,234,686 B1)*.

7. Regarding claims 1, 2, and 11, Tonai et al teach an opto-mechanical interface apparatus (seen best in figure 9) comprising an optical hybrid and an electronic hybrid adapted to receive electronic components. The optical hybrid comprises an optical chip (18), an optical fiber connector (66) and a carrier (16). The electronic hybrid comprises a printed circuit board (PCB) (6) and electronic components are mounted on the PCB (see column 5, lines 16-49 and column 5,

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line 61 to column 6, line 9). The apparatus further comprises an adapter fixture (8a-d) for fixing the electronic hybrid and the optical hybrid to one another to form a combined hybrid. A lower-capsule part (80, 96, & 102) mates with an upper-capsule part (82) to enclose at least a part of the combined hybrid as shown in figure 9.

8. Regarding claim 3, Tonai et al teach an opto-mechanical interface apparatus as discussed above in reference to claim 2. Tonai et al also teach that the optical chip (18) can be a receiver chip (see column 5, lines 39-42).

9. Regarding claims 4 and 5, Tonai et al teach an opto-mechanical interface apparatus as discussed above in reference to claim 1. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ 2d 1647 (1987). The claimed “holes” are intended for allowing air to pass into the capsule. The holes (80a-80d and 86 and 88) in the upper and lower capsule parts meet this limitation because they are capable of allowing air to pass into the capsule.

10. Regarding claims 6-10, Tonai et al teach an opto-mechanical interface apparatus as discussed above in reference to claim 1. Tonai et al teach that the upper-capsule part (82) and the lower-capsule part (80, 96, & 102) mate together via snap-locking as shown in figure 9. The upper and lower capsule parts are mated together so as to form at least one cavity as shown in figure 9. The cavity is divided into two cavities (90 and 92). The first cavity (90) includes receiver electronics (22) and the second cavity (92) includes transmitter electronics (52) (see figures 8 and 9, and column 10, line 39 to column 11, line 62). The first cavity (90) can be considered an upper cavity and the second cavity (92) can be considered a lower cavity based on

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the orientation of the device. The terms “upper” and “lower” are used as references to one another and therefore one cavity is above the other when the device is oriented on its side.

11. Regarding claim 12, Tonai et al teach an opto-mechanical interface apparatus as discussed above in reference to claims 1 and 11. The device further comprises pins (10a-g, 12a-g, 40a-g, and 42a-g) for making external electrical connections and a stud (10a-g, 12a-g, 40a-g, and 42a-g) for providing stability during assembly. Tonai et al teach that the elements (10a-g, 12a-g, 40a-g, and 42a-g) serve the dual purpose of providing an electrical connection and of providing mechanical support. Since the elements serve the function of a pin and a stud, some of the elements meet the limitation of being “pins” and others can be used to meet the limitation of “studs”.

12. Regarding claim 13, Tonai et al teach an opto-mechanical interface apparatus as discussed above in reference to claim 1. The lower capsule part (80) includes a lead-through for receiving a protrusion of the electronic hybrid where the protrusion is either a pin or a stud as can be seen in figure 9.

13. Regarding claims 14 and 15, Tonai et al teach an opto-mechanical interface apparatus as discussed above in reference to claim 1. It has been held that the recitation that an element is “adapted to” perform a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, USPQ 138. The upper and lower capsule parts have the ability to perform the claimed function of positioning and fixing the contents of the combined hybrid as can be seen in figure 9.

14. Regarding claim 16, Tonai et al teach an opto-mechanical interface apparatus as discussed above in reference to claim 1. Tonai et al teach that the apparatus includes a

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transmitter (48) in module (64) and a receiver (18) in module (30). The apparatus also includes an optical fiber (shown in figure 7).

15. Regarding claims 17, 19, and 23, Tonai et al teach a method of assembling an opto-mechanical interface apparatus as discussed above comprising the steps of forming a combined hybrid by attaching an adapter fixture to an electronic hybrid and attaching an optical hybrid to the electronic hybrid as shown in figures 1-6. Tonai et al further teach that the hybrid is placed into a lower capsule part (80) (shown in figure 8) which is then mated with an upper capsule part (82) as shown in figure 9. The mating of the upper and lower capsule parts encloses at least part of the combined hybrid as shown in figure 9.

16. Regarding claims 20-22, Tonai et al teach a method of assembling an opto-mechanical interface apparatus as discussed above in reference to claim 17. The step of mating the upper and lower capsules includes snap-locking as can be seen in figure 9. The step of mating also includes fixing the contents of the apparatus as can be seen in figure 9. The step of placing the combined hybrid in the first capsule part includes positioning the combined hybrid in the first capsule part as shown in figure 8.

17. Regarding claim 18, Tonai et al teach a method of assembling an opto-mechanical interface apparatus as discussed above in reference to claim 17. Tonai et al also teach testing at least one component prior to mating the upper and lower capsules (see column 10, lines 12-25). This test ensures that the ferrule is properly aligned with the opto-electronic device. By testing the alignment, the functionality of the device is also tested.

*Conclusion*

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derek L. Dupuis whose telephone number is (571) 272-3101. The examiner can normally be reached on Monday - Friday 8:30am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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